



**STATE OF IOWA**  
**MASTER AGREEMENT**  
Contract Declaration and Execution

**MA# 005 3429-09**

**EFFECTIVE BEGIN DATE:** 08-13-2008  
**EXPIRATION DATE:** 08-12-2009  
**PAGE:** 1 of 3

**VENDOR:**

**Welch Products Inc**  
**205 S Garfield**  
**PO Box Z**  
**Carlisle, IA 50047**  
**USA**

**VENDOR CONTACT:**

Tim Mahoney  
**PHONE:** (515) 989-0829 **EXT:**  
**EMAIL:** mahoneywelch@aol.com

**ISSUER:**

DOUGLAS REED  
**PHONE:** 5152426151  
**EMAIL:** Doug.Reed@iowa.gov

**FOB**

**Contract For:** Tiles Made of Rubber for Playground Safety

See Attachments. This contract references Request for Proposal # RFP0108005001 dated 7/15/08. Contact Person: Tim Mahoney 205 S. Garfield PO Box Z Carlisle, IA 50047 Phone: (515) 989-0829 E-mail: mahoneywelch@aol.com

**RENEWAL OPTIONS**

**FROM** 08-13-2009 **TO** 08-12-2010  
**FROM** 08-13-2010 **TO** 08-12-2011

**AUTHORIZED DEPARTMENT**

**ALL**  
**SUB** Other Governmental Entities

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR		STATE OF IOWA	
CONTRACTOR'S NAME (If other than an individual, state whether a corp., partnership, etc.		AGENCY NAME	
BY (Authorized Signature)	Date Signed	BY (Authorized Signature)	Date Signed
Printed Name and Title of Person Signing		Printed Name and Title of Person Signing	
Address		Address	



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LINE NO.	QUANTITY / SERVICE DATES	UNIT	COMMODITY / DESCRIPTION	UNIT COST / PRICE OF SERVICE
1	0.00000	SQFT	65050	\$0.000000 \$0.000000

**Safety Surfaces, Playground**

**Safety Surfaces, Playground**

2.35" colored tiles Price per Square Foot is \$10.00. Price Includes Mat Adhesive, Pre On-site Survey, On-site Visit for Installation Training, On-ste visit to Oversee Installation (if requested), Post Installation Certification, and Freight is FOB Destination.



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**TERMS AND CONDITIONS**

**Terms & Conditions Goods**

The parties agree to comply with the terms and conditions on the following web site which are by this reference made a part of the Agreement. General Terms and Conditions for goods contracts are posted at: [http://das.gse.iowa.gov/terms\\_goods.pdf](http://das.gse.iowa.gov/terms_goods.pdf)

**TAB 13****IOWA DNR - ADA Access Pads - RFP0108005001**

<u>Park</u>	<u>Area</u>	<u>Sq Ft</u>	<u>\$ 10.00</u>	<u>Areas</u>	
1 Backbone	Swings	1980	\$ 19,800	2	
	Area 1	300	\$ 3,000		
2 Beeds Lake	One Area	300	\$ 3,000	1	
3 Bellevue	One Area	432	\$ 4,320	1	
4 Big Creek - Leather Assoc	Swings	400	\$ 4,000	1	
5 Brushy Creek	Area One	350	\$ 3,500	2	
	Area Two	350	\$ 3,500		
6 George Wyth	Frisbee	336	\$ 3,360	2	
	Other	350	\$ 3,500		
7 Lacey-Keosauqua	One Area	294	\$ 2,940	1	
8 Lake Darling	Area One	608	\$ 6,080	1	Pea Gravel w/existig mats
9 Lake MacBride	Area one	232	\$ 2,320	2	
	Area Two	120	\$ 1,200		
10 Lake of Three Fires	One Area	300	\$ 3,000	1	
11 Maquoketa Caves	One Area	350	\$ 3,500	1	
12 Nine eagles	Older	252	\$ 2,520	2	
	Younger	240	\$ 2,400		
13 Pilot Knob	One Area	270	\$ 2,700	1	
14 Pleasant Creek	One Area	350	\$ 3,500	1	
15 Prairie Rose	One Area	300	\$ 3,000	1	
16 Rock Creek	One Area	300	\$ 3,000	1	
17 Stone State Park	One Area	300	\$ 3,000	1	
18 Wapsipinicon	One Area	276	\$ 2,760	1	
<b>TOTALS</b>		<b>8990</b>	<b>\$ 89,900</b>	<b>23</b>	
		Plus Freight	4,000		
		<b>PROJECT TOTAL</b>	<b>\$ 93,900</b>	<b>23</b>	

**Pricing Includes:**

2.35 " colored Tiles  
Mat Adhesive  
Pre On- Site Survey  
On Site Visit - Install Training  
On Site - Install Oversight (If requested)  
Post Install Certification  
Consolidated Freight (FOB Destination - Multiple Drops)

# ***Certificate of Warranty***



**Welch Products, Inc.**

## ***5 Year Warranty***

**Welch Products, Inc guarantees**  
***DuroMat Extended-Life™ playground safety tiles***  
to be free from defects in materials and workmanship for a  
period of five (5) years from the date of purchase for tiles  
installed in accordance with Welch Products' guidelines.

**Welch Products warrants that *DuroMat Extended-Life™ Tiles*  
will maintain structural integrity for a period of five (5) years  
from the date of purchase.**

This warranty specifically excludes normal wear and tear, normal color fading, acts of God, shipping damage, improper installation (unless installed by the factory or authorized representatives), use of non-approved adhesives or sparse application of adhesive, or damage resulting from misuse, abuse, vandalism or theft.

Welch Products', Inc entire liability and the purchaser's sole remedy, in the unlikely event that *DuroMat Extended Life™ Tiles* do not conform to this guarantee, shall be limited to replacement of the defective tile(s) and shall not include costs associated with shipping, removal or installation or consequential damages.

**Location:**

**Purchase Date:**

Welch Products, Inc. • PO Box Z • Carlisle, IA 50047 • 515-989-0829

## PRODUCT SPECIFICATIONS

### *DuroMat Extended Life™ Playground Tiles* *The New Standard in Playground Safety*

Welch Products, Inc is the exclusive manufacturer of DuroMat Extended Life™ Playground Safety Tiles. Welch Products is the sole source provider of these unique 2' x 2' tiles manufactured with our patented cold-cure manufacturing process from recycled rubber and a proprietary cold-cure resin. Tiles can be manufactured to meet a variety of customer size and feature specifications.

Resilient tile safety surfacing shall meet the following **American Society of Testing and Materials (ASTM)** standards:



- ASTM F1292-99 Specification for **Impact Attenuation of Surface Systems** Under and Around Playground Equipment (**Critical Fall Height Requirements**)
- ASTM F1951-99 **Determination of Accessibility of Surface Systems** Under and Around Playground Equipment
- ASTM C1028 **Coefficient of Friction**
- ASTM D2859 **Controlled Burn** and test data must be provided.

Playground tiles are available in three colors: Hunter Green, Brick Red and Black. The safety tiles are 2' x 2' square x 1.7" (4' fall height), 2.35" (7' fall height), or 3.6" (8' fall height); must have full length edge adhesion with a 1/2" raise for drainage; be consistently uniform in size and color and carry a minimum five-year warranty. Tiles are IPEMA certified as an approved playground safety surface.

Tiles are installed on a solid concrete or asphalt surface. Construction grade adhesive is included with the tiles.

#### **ADA - Handicap Accessible Surfaces (15.6.7)**

The Americans with Disabilities Act Accessibility Guidelines (ADAAG) tackle the complex issue of providing surfaces beneath outdoor play components that are soft enough to limit injury from falls but that are also firm and stable enough for wheelchair maneuvering.

The guidelines rely on two standards from the **American Society for Testing and Materials (ASTM)**. For wheelchair access, surfaces are required to be "firm, stable, and slip resistant" as specified in ADAAG and to meet the



- ASTM standard F1951-99 for accessibility, based on a measurement of the physical effort to maneuver a wheelchair across a surface. Accessible surfaces within the use zone (the ground level area beneath and immediately adjacent to a play structure)
- ASTM F1292-99 requirements for drop testing "impact attenuating" surface

ASTM F-1951-99 TEST DATA	DETROIT TESTING LABORATORY RESULTS			
WheelchairRider 174.6 #	No MaterialWork Per Meter	With Material Work Per Meter	No MaterialWork Per Meter	With Material Work Per Meter
With Wheelchair 207.7#	11.953 NM	2.441 NM	12.842 NM	3.822 NM

# DuroMat Extended Life™ Playground Tiles

*The New Standard in Playground Safety*

## DuroMat Extended Life™ Specifications

- Trade Name:** DuroMat Extended Life™ Playground Safety Tile
- Primary Use:** Playground and recreation (indoor/outdoor) areas requiring fall height protection as well as accessibility.
- Secondary Use:** Weight rooms, wrestling rooms, aerobic flooring, patios / decks, swimming pools / diving boards, stalls, corrals, golf facilities, locker rooms, lounge areas, walkways, etc...
- Real World Testing for Injury Reduction.** Tiles were tested in a four year pilot project funded by the State of Iowa and administered by the National Program for Playground Safety – Pre and Post injury data show that tiles reduced serious injuries by 75%.
- Material:** Crumb Rubber (ground tires) mixed with special urethane resin and molded to form custom, high quality products.
- Patents:** Several patents applied and approved for design and manufacturing process.
- Warranty:** *5 year limited warranty*
- Anticipated Life Expectancy** *20-25 years based on accelerated lab testing*
- Time on Market** *Introduced in 1999, hundreds of installation sites.*
- Weight:** *1.7" tile = 23.5lbs, 2.35" tile = 28.5lbs, 3.6" tile = 49lbs*

ASTM F-1292 TEST DATA	DETROIT TESTING LABORATORY					
Tile SizeFall Height	-1° CHIC	-1° CG- Max	23° CHIC	23° CG- Max	49° CHIC	49° CG- Max
1.7" DuroMat Tile 4' Fall Height	758.14	151.12	774.39	151.61	751.10	144.77
2.35" DuroMat Tile 7' Fall Height	883.47	146.02	921.68	150.99	957.30	149.25
3.6" DuroMat Tile 8' Fall Height	870.79	136.07	774.20	124.75	854.16	129.10

# DuroMat Extended Life™ Playground Tiles

## The New Standard in Playground Safety

### IPEMA Certificate of Compliance



In the interest of public playground safety, IPEMA provides a third party certification service whereby Detroit Testing Laboratory, Inc. validates a manufacturer's certification of conformance to the ASTM F1292, Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment Standard. The manufacturer listed below has received written validation from Detroit Testing Laboratory, Inc. that the products listed below conform with the requirements of ASTM F1292.

Manufacturer: **Welch Products, Inc.**

Date of Issue: **Wednesday, May 29, 2002**

<u>Product #</u>	<u>Product Line</u>	<u>Description</u>	<u>Th/Ht Ratio</u>
DUROMAT 1.7	DUROMAT	PLAYGROUND SURFACE TILE	1.7"/4'
DUROMAT 2.35	DUROMAT	PLAYGROUND SURFACE TILE	2.35"/7'
DUROMAT 3.6	DUROMAT	PLAYGROUND SURFACE TILE	3.6"/8'

### Product Data: DuroMat Extended Life™ Playground Safety Tiles

	1.7" Tile	2.35" Tile	3.6" Tile
<b>Dimensions</b>	24" x 24" x 1.7" +/- 1/16"	24" x 24" x 1.7" +/- 1/16"	24" x 24" x 1.7" +/- 1/16"
<b>Perimeter Adhesion Bar</b>	Full-length adhesion to edge. Raised 1/2" for drainage	Same	Same
<b>Weight</b>	5.875 lbs/sq ft	7.125 lbs/sq ft	12.25 lbs/sq ft

### Testing Results

Testing Property	Test Method	Typical Result
Tear Resistance	ASTM D-624, Die C	16.6 PPI
Tensile Strength	ASTM D412	30 lb. – 60 PSI
Coefficient of Friction	ASTM C1028	Dry – 1.51 Wet – 1.23
Controlled Burn	ASTM D2859	No charring observed





# Research Results from the Iowa Safe Surfacing Initiative 2003-2006

Collaboration between



## **EXECUTIVE SUMMARY**

### **(2003-2006)**

The Iowa Legislature has supported a project to provide safe outdoor education environments for elementary schools, child care centers, and state parks in the State of Iowa. The four objectives of the project were to:

- 1) Protect Iowa children from unintentional playground injuries caused by falling to unsafe surfacing under and around playgrounds;
- 2) Contribute to a safer infrastructure for schools, child care centers, and parks in
- 3) Educate schools, child care centers, and park departments about playground safety; and
- 4) Help reduce the tire waste problem in the state.

To accomplish these objectives, the National Program for Playground Safety has worked in collaboration with Welch Products (an Iowa based company) to provide playground safety training as well as rubber tiles at selected sites throughout the state. In July 2003, Governor Vilsack along with a team of legislators signed House Amendment 1541. The bill was refunded in 2004 and 2005. The project is called the Iowa Safe Surfacing Initiative (ISSI).

To evaluate if ISSI is meeting its primary goal of protecting Iowa children from unintentional playground injuries caused by falling to unsafe surfacing under and around playgrounds, the NPPS has analyzed pre and post injury data from all the sites selected for this project. In addition, NPPS has examined the playground safety training's value. The following is the report of the findings.

It should be noted that some of the schools and child care centers chose to delay the installation of tiles. The pre-post data that is reported is representative of those sites that have been tracked for one year.

### **Facts**

- Overall, the pre and post injury data collected since 2003 indicate a 75% reduction of injuries that needed to receive medical attention.
  - In addition, there was a 17% reduction of minor injuries.
  - Further, 93% of children are returning to the classroom after an injury. Without training and surfacing, only 87% were returning to the classroom after an injury.
- A total of 84 individuals throughout the state of Iowa received playground safety training from the National Program for Playground Safety. On average, each participant's knowledge about creating safe play environments increased 49%.
  - It should be noted that for sites that have not received the tiles, but have attended the training, there has been a 54% reduction of minor injuries.
- The estimated economic impact of the reduction of injuries is approximately )

ISSI is benefiting the State of Iowa in many ways. ISSI is working to solve the problem with the large number of unsafe surfaces that are located in our schools, child care centers, and parks. In addition, the majority of injuries that occur during the school day are during outdoor time. NPPS has been tracking playground injuries since ISSI was launched. The following are facts of what ISSI has accomplished per each year of funding.

<p align="center"><b>Project Year 1 (2003-2004)</b> <b>Summary</b></p>
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- \* A total of 11 sites participated in the 2003-2004 study, including schools, child care centers, and state parks.

Site Selected	City
Bryant Elementary School	Sioux City
Butler Elementary School	Fort Dodge
Cedar Heights Elementary School	Cedar Falls
Grant Wood Elementary School	Cedar Rapids
Harrison Elementary School	Davenport
John Cline Elementary School	Decorah
Roosevelt Elementary School	Cherokee
Tri County Head Start	Waterloo
Backbone State Park	Dundee
George Wyth State Park	Waterloo
MacIntosh State Park	Clear Lake

- \* Pre (July 2002-July 2003) /post (July 2003-July 2004) data reveals a decrease of injuries by 59 after training and installation of tiles. This represents a 30% reduction in overall injuries.

- \*Pre (July 2002-July 2003) /post (July 2003-July 2004) data reveals a decrease by 55% the number of injuries requiring hospitalization in 2004 in comparison to 2003.

--During the 2002-2003 school year, 11 children (at selected school sites) were injured severely enough require a trip to the hospital (Pre-ISSI). Only five children, during the 2003-2004 school year visited the hospital (Post- ISSI).

- \* For the period of the 2002-2003 school year, 90% of the injured children returned to the classroom (Pre-ISSI) compared to 93% of the injured children in 2003-2004(Post-ISSI).

- \* Based on the formula that each injury (minor/major) takes at least 30 minutes of staff time at a cost of \$25.00, it is estimated that the post-reduction of injuries represents a savings of approximately \$44,250.00.

-2002-2003 = 194 injuries x 30 minutes x \$25.00 = \$145,500.00

-2003-2004 = 135 injuries x 30 minutes x \$25.00 = \$101,250.00

\* Based on medical costs of approximately \$6,000.00 per visit for serious injuries, it is estimated that the total savings in medical expenses in 2004 (Post-ISSI) from 2003 (Pre-ISSI) was approximately \$36,000.

-2002-2003 = 11 injuries x \$6,000 = \$66,000.00

-2003-2004 = 5 injuries x \$6,000 = \$30,000.00

\* Seventeen individuals from the selected sites received playground safety training. On average, each participant's knowledge increased 57% with playground safety training.

<p align="center"><b>Project Year 2 (2004-2005)</b> <b>Summary</b></p>
--

ISSI was refunded in 2004 from the Iowa Legislature (House Amendment 1541). It should be noted that some of the schools chose to delay the installation of tiles until the spring of 2005. The pre-post data that is reported is representative of those sites that have been tracked for one year (Pre-injury data from July 2003-July 2004, Post-injury data July 2004-2005).

\* A total of 17 sites participated in the 2004 study, including schools and child care centers.

Site Selected	City
Denver Elementary School	Denver
George Little Rock Elementary School	Little Rock
Walnut Elementary School	Des Moines
Monroe Elementary School	Des Moines
Solon Elementary School	Solon
Sioux City Elementary School	Sioux City
Hunt Elementary School	Bedford
Douds Elementary School	Douds
Malcolm Price Laboratory School- University of Northern Iowa	Cedar Falls
Alden Elementary School	Alden
Edgewood Colesburg Elementary School	Colesburg
Jesup Elementary School	Jesup
Carlisle Elementary School	Carlisle
Longfellow Elementary School	Council Bluffs
Martinsdale/St. Marys Elementary School	Martinsdale
Mt. Vernon Elementary School	Mount Vernon
Kidville Child Care Center	Independence

**A. Pre/Post Injury Data from 8 sites that received playground safety training and safety tiles.**

\* Decreased 39 injuries at ISSI sites representing a 10% in the reduction of injuries.

\* Decreased hospital injuries by 24 children representing an 83% reduction in serious injuries from 2003.

--During the 2003-2004 school year, 29 children were injured severely enough to have to go to the hospital (Pre-ISSI). That is approximately \$174,000 in expenses. Only five children, during the 2004-2005 school year visited the hospital (Post-ISSI). That is approximately \$30,000 in medical expenses.

\* For the period of the 2003-2004 school year, 93% of the injured children returned to the classroom (Pre-ISSI) compared to 98% of the injured children in 2004-2005 (Post-ISSI).

\* Two elementary schools failed to turn in pre and post injury data (Walnut and Monroe).

\* It is estimated that the post-reduction of injuries represents a savings of approximately \$29,250.00.

-2003-2004 = 378 injuries x 30 minutes x \$25,00 = \$283,500.00

-2004-2005 = 339 injuries x 30 minutes x \$25,00 = \$254,250.00

\* It is estimated that the total savings in medical expenses in 2005 (Post-ISSI) from 2004 (Pre-ISSI) was approximately \$144,000.00 in medical expenses.

#### **B. Pre/Post Injury Data from 5 sites that received only playground safety training.**

Two school sites did not install tiles until the summer of 2005 (Mount Vernon and Martinsdale/St. Mary's). They did not turn in pre data because the playground was under construction. Five sites did not install tiles until the fall of 2005. The pre and post injury data that is reported is only based on the playground safety training they received.

\* Decreased 282 injuries at ISSI sites which represents a 54% reduction of injuries from 2003-2004.

\* Decreased hospital injuries by two children which represents an 11% reduction in serious injuries.

--During the 2003-2004 school year, 19 children were injured severely enough to have to go to the hospital (Pre-ISSI Training). Seventeen children during the 2004-2005 school year visited the hospital (Post-ISSI Training).

\* It is estimated that the post-reduction of injuries from sites receiving only training represents a savings of approximately \$211,500.00

-2003-2004 = 519 injuries x 30 minutes x \$25,00 = \$389,250.00

$$\text{-2004-2005} = 237 \text{ injuries} \times 30 \text{ minutes} \times \$25.00 = \$177,750.00$$

- \* It is estimated that the total savings in medical expenses in 2005 (Post-ISSI Training) from 2004 (Pre-ISSI Training) was approximately \$12,000.00 in medical expenses.
- \* During the 2003-2004 school year, 83% of the injured children returned to the classroom (Pre-ISSI training). During the 2004-2005 school year, 93% of the injured children went back to the classroom (Post-ISSI training).
- \* Thirty individuals from the selected sites received playground safety training. On average, each participant's knowledge increased 43% with playground safety training

<b>Project Year 3 (2005-2006)</b> <b>Summary</b>
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Project Year 3 is in progress. A total of 20 sites participated in the 2005 study, including schools and child care centers. There is no data available at this time. Selected sites are collecting data.

Site Selected	City
Bertha Godfrey Elementary School	Algona
Herbert Hoover Elementary School	Bettendorf
Child Development Center-University of Northern Iowa	Cedar Falls
Stay N Play Child Care Center	Clinton
YMCA Child Care Learning Center	Davenport
Elkader Child Care Center	Elkader
Fremont Elementary School	Fremont
Dallas Center Grimes Elementary School	Grimes
Kountry Kare Kids Child Care Center	Harlan
Van Allen Elementary School	Iowa City
Mann Preschool	Iowa City
George Washington Elementary School	Keokuk
Franklin Elementary School	Marshalltown
Camp Courageous of Iowa	Monticello
Perry Elementary School	Perry
Sergeant Bluffs Elementary School	Sergeant Bluffs
Upper Des Moines Opportunities	Spencer
Kids Corner Child Care Center	Tama
Wapello Elementary School	Wapello
Waverly Child Care	Waverly

- \* Nineteen of these 20 sites received playground safety training in August 2005. Herbert Hoover was unable to attend this August. They will be attending in 2006.

\* Thirty seven individuals from the selected sites received playground safety training. On average, each participant's knowledge increased 48% with playground safety training.

### **Summary**

It is apparent that ISSI is significantly reducing serious playground injuries in schools and child care centers in the State of Iowa. This is occurring because 1) people are becoming more knowledgeable about playground safety through training as indicated by the results of the NPPS training data and 2) the installation of rubber tiles under and around playground equipment is providing a low maintenance and consistent safe cushion for children who are falling off the equipment.

While not a major purpose of this project, it is clear that the provision of both training and tiles are significantly reducing the cost of injuries in schools and childcare centers. Thus, ISSI has become a win-win project for children and taxpayers in the State of Iowa.

